



IEA2021 - Scientific Symposium Machine and System Safety in Digital Transformation

Peter Nickel, Hans-Jürgen Bischoff



21st Triennial Congress of the International Ergonomics Association (IEA 2021)
“HFE in the Connected World – L’Ergonomie 4.0”,
June 13-18, 2021, virtually in Vancouver, Canada

Machine and System Safety in Digital Transformation

- **IEA2021 Scientific Symposium #33 / 1-3**
 - Part #33-1 (June 15, 09h45 (UTC-7))
Machines and Systems **in Automation**
Chairs: Peter Nickel & Hans-Jürgen Bischoff
 - Part #33-2 (June 16, 07h45 (UTC-7))
Machines and Systems **in Manufacturing**
Chairs: Hans-Jürgen Bischoff & Peter Nickel
 - Part #33-3 (June 17, 06h00 (UTC-7))
Machines and Systems **in Transportation**
Chairs: Peter Nickel & Hans-Jürgen Bischoff
- **Information and Contact**
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■ IEA2021 Scientific Symposium #33-3

■ Thursday, 06h00 (UTC-7), June 17, 2021

- N. **Man**, S.S. Man, T.R. Zhang, W.H. Chan, A.H.S. Chan:
Psychological assessment for bus captain selection
- M. **Wichtl**, U. Amon-Glassl:
Machine and system safety – not without ergonomics! An explanation based on the example of the planning and the construction process of a new tram's driver's cabin

■ Machines and Systems in Transportation

■ Chairs: Peter Nickel & Hans-Jürgen Bischoff

- C. **Murie**, W. Buchmann, L. Cuvelier, F. Barcellini, F. Bernard, R. Paquin:
Acting in safety from the design to the implementation of helicopter maintenance
- S. **Frohriep**:
Future-proof commercial vehicle seat and interiors development
- R. **Dewi**, M. Rohmatin, A. Maryani, D. Dewi:
Improving recognizability rate of traffic sign icons

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■ IEA2021 Scientific Symposium #33-2

■ Wednesday, 07h45 (UTC-7), June 16, 2021

- Q. **Bourret**, J. Charland, D. Brouillette, D. Imbeau, J.-B. Djire:
Ergo4All: A risk assessment and ergonomic guidance tool
- E. **Poddar**:
HFE in ever-changing industrial scenario

■ Machines and Systems in Manufacturing

■ Chairs: Hans-Jürgen Bischoff & Peter Nickel

- C. **Berlin**, M. Wollter Bergman, M. Babapour Chafi, A.-C. Falck, R. Örtengren:
A systemic overview of factors affecting the cognitive performance of industrial manual assembly workers
- R. **Osqueizadeh**, S. Raeisi, M. Maghsoudipour, A. Salar Jafarpisheh:
Ergonomic redesign of an industrial control panel



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■ IEA2021 Scientific Symposium #33-1

■ Tuesday, 09h45 (UTC-7), June 15, 2021

- P. **Nickel**, H.-J. Bischoff, P. Bärenz, S. Radandt, U. Kaufmann, M. Wichtl, L. Monica, E. Poddar: Work system design in machinery and system safety with a focus on human system interaction
- L. **Monica**, S. Anastasi, F. Draicchio, J. Ortiz, G. Chini, S. Toxiri: Occupational exoskeletons: A new challenge for human factors, ergonomics and safety disciplines in the workplace of the future

■ Machines and Systems in Automation

■ Chairs: Peter Nickel & Hans-Jürgen Bischoff

- D. **Patten**, M. Wilson, R. Vomiero: Machine safety and robotics compliance and HFE design
- L. **Gualtieri**, F. Fraboni, M. De Marchi, E. Rauch: Design guidelines for cognitive ergonomics in industrial human-robot collaborative assembly systems



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